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(54) **AUDIO I/O HEADSET PLUG AND PLUG
DETECTION CIRCUITRY**

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(52) **U.S. Cl.** **455/556.1; 455/575.2**

(58) **Field of Classification Search** **455/575.2,**
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See application file for complete search history.

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(57) **ABSTRACT**

A single prong, multiple signal conducting plug and plug
detection circuitry is provided. The plug may be electrically
coupled to a stereo headset including a microphone. The plug
may include four signal conducting regions arranged in a
predetermined order along the length of the prong. Detection
circuitry may be operative to determine whether a micro-
phone type of plug (e.g., a four region plug including a micro-
phone region and two audio regions, or a three region plug
including microphone region and only one audio region) or a
non-microphone type of plug (e.g., stereo plug) is inserted
into the jack of an electronic device (e.g., mobile phone).
Detection circuitry may also detect user activated functions
performed in response to user activation of one or more
switches included with the headset. For example, the headset
may include a single switch for performing a function with
respect to a microphone (e.g., end-call function).

26 Claims, 17 Drawing Sheets

